



Illinois Route 31 from IL 176 to IL 120 - Phase I Study
Community Advisory Group (CAG) Meeting #2 Index

Meeting Date: September 22, 2011

CAG Meeting #2: Index of Meeting Materials

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AGENDA

Illinois Route 31 Phase I Study:
Illinois Route 176 to Illinois Route 120
McHenry County

McHenry County College Shah Center
4100 W. Shamrock Lane
McHenry, Illinois 60050
Thursday, September 22, 2011
1:00 p.m. to 3:00 p.m.



Community Advisory Group (CAG) Meeting #2

Agenda Item	Timeline
I. Welcome	1:00 p.m.
A. Introductions	
B. Meeting Overview and CAG Binder Handouts	
C. Summary of CAG Meeting #1	
II. Purpose and Need	1:15 p.m.
A. What is Purpose and Need	
B. Why is Purpose and Need Important	
C. IL Route 31 - Project Purpose	
B. IL Route 31 - Identified Needs & Improvement Objectives	
III. Introduction to Alternatives Development	1:45 p.m.
A. Alternatives Development Process	
B. Evaluation Criteria Introduction	
C. Environmental, Social, and Cultural Resources	
D. Roadway Safety Improvement Toolbox Introduction	
IV. Workshop: Identify and Map Key Project Constraints	2:20 p.m.
A. Overview of Workshop exercise	
B. Complete Group Exercise	2:25 p.m.
C. Discuss exercise results as large group	2:45 p.m.
VI. Recap and Future Meetings	2:55 p.m.
(CAG Meeting Adjourned)	



Introductions

- Illinois Department of Transportation
- STV Incorporated & Sub-Consultants
- Community Advisory Group Members
 - » Please refer to list provided in Binder.
 - » Introduce yourself and state the community in which you live and/or which group and/or government agency you represent.

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Meeting Agenda Overview & CAG Binders

- Meeting Agenda Overview
 - » Please refer to agenda provided in Binder.
- CAG Binder Handouts
 - » Meeting Materials
 - » Reference Materials
 - » Additional materials available at www.ILRoute31.com

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Summary of CAG Meeting #1

- Project Introduction
- Reviewed IDOT Project Development and Public Involvement Process
- Reviewed Public Meeting and Questionnaire Responses
- Workshop: Project Problem Statement
 - » Please refer to the CAG Meeting #1 Summary documents in your binder



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CAG Meeting #1 Milestones

- Reviewed and Accepted Ground Rules
 - » Please refer to rules provided in the CAG binder
- Identified Key Transportation Issues and Concerns
 - » Congestion (Existing and Future)
 - » Safety
 - » Accessibility
 - » Existing design deficiencies
- Developed Project Problem Statement



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Summary of CAG Meeting #1

Project Problem Statement

"The transportation problems along Illinois Route 31, from Illinois Route 176 to Illinois Route 120, to be solved by this project are: congestion (existing and future), safety for multi-modal users, accessibility for all users, and existing design deficiencies; in addition, minimize overall environmental impacts (e.g. storm water runoff and water quality)."



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Purpose and Need

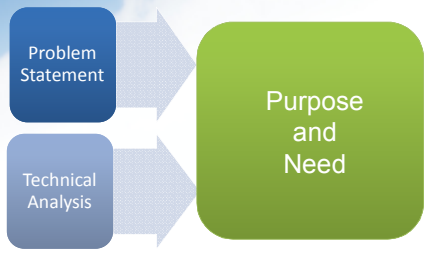
- What is the Purpose and Need?
 - » Required as part of an Environmental Assessment (EA)
 - » Consists of three parts:
 - » Purpose, Need and Goals and Objectives
 - » The foundation for the identification and evaluation of Project Alternatives
 - » How does a proposed solution address the **PURPOSE** of the project?
 - » How does a proposed solution address the **NEED** for improvements?

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Purpose and Need Development



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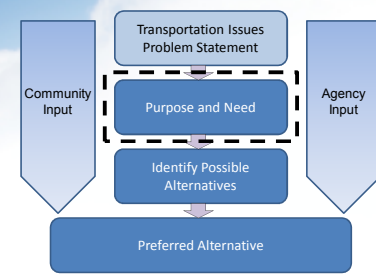
graph LR
    PS[Problem Statement] --> PND[Purpose and Need]
    TA[Technical Analysis] --> PND
    
```

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Project Process Purpose and Need



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graph TD
    CI[Community Input] --> TIPS[Transportation Issues Problem Statement]
    AI[Agency Input] --> TIPS
    TIPS --> PN[Purpose and Need]
    PN --> IPA[Identify Possible Alternatives]
    IPA --> PA[Preferred Alternative]
    
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Purpose and Need

- Why is the Purpose and Need Important?
 - » Required by law
 - » Sets the stage for consideration of alternatives
 - » Clarifies expected project outcome
 - » Justifies project expenditure
 - » Does not recommend specific solutions

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IL Route 31 – Project Purpose

- Project Purpose

“The purpose of the proposed action is to address transportation safety, capacity, pedestrian and bicycle needs, and geometric deficiencies along Illinois Route 31 from the intersection of Illinois Route 176 to the intersection of Illinois Route 120, in Eastern McHenry County.”

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IL Route 31 – Identified Needs

- Needs Statement
 - Improve Roadway Safety
 - Expand Roadway Capacity and Address Traffic Issues
 - Correct Existing Roadway Design Deficiencies
 - Provide Pedestrian and Bicycle Accommodations

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Identified Needs: Roadway Safety

■ Roadway Safety

» Crash Statistics (2006-2009) – 917 Total Crashes

• 443 Crashes in Roadway Segments (Non-intersection)

- 54% Rear End Collisions
- 11% Turning Collisions
- 9% Animal Collisions
- 8% Fixed Object
- 5% Sideswipe Same Direction
- 4% Angle Collisions
- 10% Other



» 6 Fatalities, 54 Incapacitating Injuries

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Identified Needs: Roadway Safety

■ Summary of Fatal Crashes (2006-2009)

» Two at Intersection at Half Mile Trail

- One head-on, one turning collision, two separate incidents

» One on IL 31 Segment – Oak Crest Road to Half Mile Trail

- Overturned vehicle crash

» One on IL 31 Segment – Half Mile Trail to Ames Road

- Head-on collision

» Two on IL 31 Segment – Gracy to Veterans Parkway

- One head-on, one fixed-object collision, two separate incidents

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Identified Needs: Roadway Safety

■ Summary of Fatal Crashes (2006-2009)

» Head-on Collisions Predominant Type

» Shady Oaks Lane to Veterans Drive

- All fatal crashes from 2006 to 2009 are located within this segment of IL Route 31
- This segment of IL Route 31 has the greatest number of geometric deficiencies throughout the corridor
- Coincides with the large vertical profile “valley” in middle of the project

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Identified Needs: Roadway Safety

- **Pedestrian and Bicyclist Safety**
 - » **Separate Facilities:** Create a safe environment for pedestrians and bicyclists
 - » **Roadway Interface:** Provide suitable crossing facilities
- **Top 5% Crash Locations**
 - » IL Route 176 to Gracy Road




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Identified Needs: Traffic & Capacity

- **Traffic and Capacity**
 - » Existing and Projected Levels of Service (LOS)



LOS "A"
LOS "B"
LOS "C"
LOS "D"
LOS "E"
LOS "F"

- » Year 2040 "No-Build Option" Traffic Projections
 - Majority of study area LOS "E"
 - IL 176 to Half Mile Trail LOS "F"

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Identified Needs: Traffic & Capacity

- **Lack of Lane Capacity**
 - » Inadequate through lane capacity
 - » Lack of turn lanes
 - » Inadequate turn lane storage
- **Intersection Delay**
 - » Inadequate Phasing/Timing
 - » Inadequate through and turn lane capacity




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Need: Existing Design Deficiencies

- Sight Distance Issues
 - » Horizontal
 - » Vertical
- Roadway Flooding Conditions
- Operational Deficiencies
- Lack of Turn Lanes
- Inadequate Turn Lane Storage
- Roadside Design Elements
- Driveway Entrances



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Block Route 28 • Route 116 to Route 120



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Need: Pedestrian and Bicycle Accommodations

- Safe Bicycle Accommodations
- Contiguous Sidewalk
- Pedestrian and Bicycle Crossing Accommodations at Signalized Intersections
- Connectivity to Existing Pedestrian and Bicycle Networks



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Project Goals: Roadway Safety

- Motorists: Reduce Number of Crashes
- Pedestrian/Bicyclists: Provide suitable facilities
- Property/Business Owners: Ability to access property safely



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Project Goals: Traffic & Capacity

- Increase Mobility
- Reduce Congestion
- Reduce Conflict Points
- Improve Intersection Performance
- Accommodate for existing and future economic development demands



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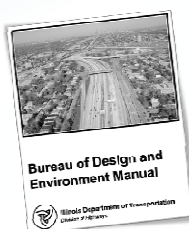
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Project Goals: Proposed Design

- Geometric Improvements
 - » Horizontal Geometry
 - » Vertical Geometry
- Drainage Improvements
- Update Roadway to Meet Current Design Standards
- SRA Design Criteria



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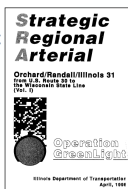
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What is a Strategic Regional Arterial?

- Strategic Regional Arterial (SRA)
 - » Regional Arterial Roadway Network
 - » High volumes of local & regional traffic
 - » Integration with expressway and transit transportation networks
 - » Has specific design criteria to minimize delays to traffic
 - » Available on IDOT's website



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Project Goals: Pedestrian and Bicycle Accommodations

- Create a safe environment for pedestrians and bicyclists
- Provide suitable crossing facilities at various locations throughout the project area
- IDOT Complete Streets Policy



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Alternatives Development

- Alternatives development combines:
 - » Stakeholder input to date
 - » Project Purpose and Need
 - » Project elements
 - » Analysis of existing conditions
 - » Technical analysis of design requirements and constraints



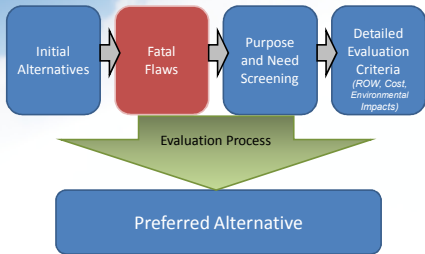
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Alternates Development Evaluation Process



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Evaluation Criteria

- **Meets Identified Needs**
 - » Safety, Traffic and Capacity, Accessibility / Pedestrian & Bicyclist Accommodations, Corrects Existing Design Deficiencies
- **Environmental, Social, and Cultural Impacts**
 - » Drainage, Wetlands, Parks, Historic Buildings, Etc.
- **Property Impacts / Right-of-way**
 - » Residential, Commercial, Land Use Plans
- **Construction Costs**
 - » Construction, Maintenance

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Environmental, Social, and Cultural Resources

<ul style="list-style-type: none"> ▪ Wetlands ▪ Floodplains ▪ Threatened and Endangered Species ▪ Parks / Recreation Areas ▪ Agricultural Land ▪ Ground Water ▪ Special Waste 	<ul style="list-style-type: none"> ▪ Air Quality ▪ Traffic Noise ▪ Multi-use trails ▪ Trees and Vegetation ▪ Surface Water Resources ▪ Historical and Archeological Properties
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Wetlands


Wetlands are transitional areas between wet and dry areas, defined by specific plants, soil, and hydrology.

Importance of Wetlands

- Improve water quality
- Provide wildlife habitat
- Adds flood control
- Filters nutrients
- Groundwater recharge




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Floodplains



Areas adjacent to a body of water that store floodwater during flood events.



Importance of Floodplains

- Flood Control
- Reduces flow velocity

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Threatened and Endangered Species

An endangered species is a plant or animal at risk of extinction throughout all or a significant portion of its range.

A threatened species is a plant or animal likely to become endangered in the foreseeable future.



What species are in the Study Area

- Currently under review
- Environmental Survey Request submitted for IDNR review
- 84 plant and animal species in McHenry County



Blanding's Turtle


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Recreational Areas



Any publicly owned park, recreational area, or wildlife and waterfowl refuge.

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Agricultural Lands

Land used for the production of crops or raising livestock



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Groundwater

- Water located below surface in such a quantity the soil pore spaces become saturated with water
 - » Class I – Drinking Water
 - » Class II – Other Groundwater
- Ground water wells require a setback zone. A setback zone is a geographic area containing a public or private well with restrictions on land uses within that zone to protect water supply.

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Special Waste Sites

- Regulations are not established to protect special waste sites
- Avoidance of special waste sites preferred
- Special waste sites may include:
 - » Underground storage tank sites
 - » Leaking underground storage sites
 - » Hazardous waste generator sites
- Illinois State Geological Survey will identify sites



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Public Facilities

- There are no federal or state regulations, protecting non-Section 4(f) public facilities, schools, or places of worship.
- Should avoid impacting these resources, if possible.



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Historical and Archeological Properties



Any historic or archeological site (publicly or privately owned) of national, state, or local significance.

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What else is considered?

- Air Quality
- Traffic Noise
- Multi-use Trails
- Trees and Vegetation
- Surface Water Resources



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Engineering Toolbox

- A collection of design “tools” to improve safety and mobility along the highway system.
- Pedestrian Safety Improvement Tools
 - » Sidewalks / Bike / Multi-use Paths
 - » Crosswalks / Crosswalk Signals
- Roadway Safety Improvement Tools

<ul style="list-style-type: none"> » Raised Medians » Left Turn Lanes » Access Management » Improved Sight Distance 	<ul style="list-style-type: none"> » Geometric Realignments » Traffic Signal Installation / Modernization » Roadway Lighting
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Engineering Toolbox

- Capacity Improvement Tools
 - » Add Lanes
 - » Add Turn Lanes at Intersections
 - » Modify Turn Lane Storage Lengths and Tapers

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Workshop: Identify and Map Key Project Constraints

- What will be accomplished during this workshop?
 - » Identify and map key project constraints.
 - » These constraints will be used in Alternatives Development Workshop during next CAG meeting.
 - » Project Alternatives will not be discussed during this workshop.
- Group Exercise
 - » Identify and Map Key Project Constraints (15 minutes)
 - » Report back to large group by approximately 2:45 p.m.

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Next Steps and Future Meetings

- **Next Steps**
 - » Ongoing Engineering Project Development activities:
 - » Traffic Analysis / Projections
 - » Crash Analysis
 - » Environmental Surveys
 - » Development of complete Project Purpose and Need document per NEPA requirements
- **Future Meetings**
 - » CAG Meeting #3: November 2011
 - » Public Meeting #2: January 2012

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SUMMARY

Illinois Route 31 Phase I Study:
Illinois Route 176 to Illinois Route 120
McHenry County

McHenry County College Shah Center
4100 W. Shamrock Lane
McHenry, Illinois 60050
Thursday, September 1, 2011
1:00 p.m. to 3:00 p.m.



Community Advisory Group (CAG) Meeting #1

The purpose of the CAG meeting was to introduce CAG members and the project team, present and obtain concurrence on CAG ground rules, review the project development and public involvement processes, and summarize results from Public Meeting #1, as well as develop a list of key transportation issues / concerns and a Project Problem Statement.

Invited participants included stakeholders who attended the Public Informational Meeting and/or interested local groups or agencies. A total of 26 volunteers were identified and invited to this CAG meeting, and to participate in all CAG meetings throughout the duration of the project. Invitation letters were mailed to home or business addresses.

This meeting was attended by **19** invited CAG members or other interested project stakeholders; and **9** members of the project study group were present to facilitate the meeting and answer any questions (See attached sign-in sheet).

The meeting began with a 30 minute PowerPoint presentation providing project information and an overview of the project development and public involvement process to be followed on this project; a summary of the results from Public Meeting #1; an introduction to the Project Workshop session; and an overview of project next steps and future meetings.

Introductions and Presentation (Jean-Alix Peralte – STV Inc.)

- **Welcome**
 - Mr. Peralte introduced the project team including IDOT, STV Inc., and Christopher B. Burke Engineering, Ltd. (CBBEL) and briefly explained their role on the project.
 - CAG and project team members introduced themselves – name, whom they represent, and why they volunteered to join the CAG.
 - All members were given a copy of the meeting agenda and a binder with the presentation and exhibit materials to be maintained throughout the study.
 - The ground rules to be followed by the CAG were introduced and approval sought. *No objections to the project CAG Ground Rules were expressed, therefore these ground rules have been considered as approved by the CAG.*
- **Project Development and Public Involvement Process (PowerPoint)**
 - IDOT Project Development and Phase I Study Process

- Phase I Study Schedule. *Mr. Peralte noted that the schedule has been revised since the first Public Meeting to include an additional Public Meeting, tentatively scheduled for the summer of 2012.*
 - What is Context Sensitive Solutions
 - Stakeholder Involvement Plan (SIP). Latest copy is included in CAG binder and available for download on the project website: www.ILRoute31.com
 - National Environmental Policy Act (NEPA)
 - Public Involvement Opportunities
 - Project Study Group (PSG)
 - Community Advisory Group (CSG)
- **Summary of Public Meeting and Questionnaire Responses (PowerPoint)**
 - Participants asked to refer to Public Meeting #1 Summary document and Summary of Public Meeting #1 comments document in CAG binder.
 - Primary Issues / concerns from Context Audit Form: Pedestrian/Bicycle Accessibility, Traffic Safety, Traffic Congestion, Residential Property Impacts, Business Impacts / Access.
 - A participating CAG member stated that she doesn't believe the issues shown on the slide represent all primary issues along the project corridor that were expressed by participants at Public Meeting #1. *Mr. Peralte noted that the issues shown on the slide are those that came up most on the Context Audit Forms that were submitted by stakeholders after the public meeting; not necessarily all project issues. The list of issues shown on the slide is to spark conversation during the workshop portion of today's meeting. During the workshop, other issues will be noted and considered.*
- **Introduction to the Workshop: Project Problem Statement (PowerPoint)**
 - What is a Project Problem Statement?
 - What will be accomplished during this workshop? Identify key transportation issues / concerns and use these issues / concerns to develop a Project Problem Statement. Project Alternatives will not be discussed during this workshop.
 - Group Exercise Introduction and Group Assignments. To break out into 3 small groups of 6-7 to work on 2 different group exercises (Part A: Brainstorming Key Transportation Issues / Concerns & Part B: Developing Draft Project Problem Statement). Group assignments based on color on name tag and name plates. If you don't have color, please see STV representative. Each group to select Spokesperson to report results of small group discussions to large group.
 - Large group to develop single Project Problem Statement
- **Next Steps and Future Meetings (PowerPoint)**
 - Next Steps: Ongoing Engineering Project Development Activities and Development of Project Purpose and Need Statement per NEPA requirements.
 - Future Meetings: CAG Meeting #2 set for September 22, 2011, CAG Meeting #3 in October, and Public Meeting #2 in November.

There were no questions at the end of the presentation.

Workshop: Project Problem Statement (lead by Mike Matkovic – CBBEL)

After the presentation, CAG members were broken up into groups of 6 to 7 to brainstorm key transportation issues / concerns along Illinois Route 31 from Illinois Route 176 to Illinois Route 120, and to develop a project problem statement based on the 4 to 5 most important issues for the group. Below is summary of the group assignments and results of the workshop exercises:

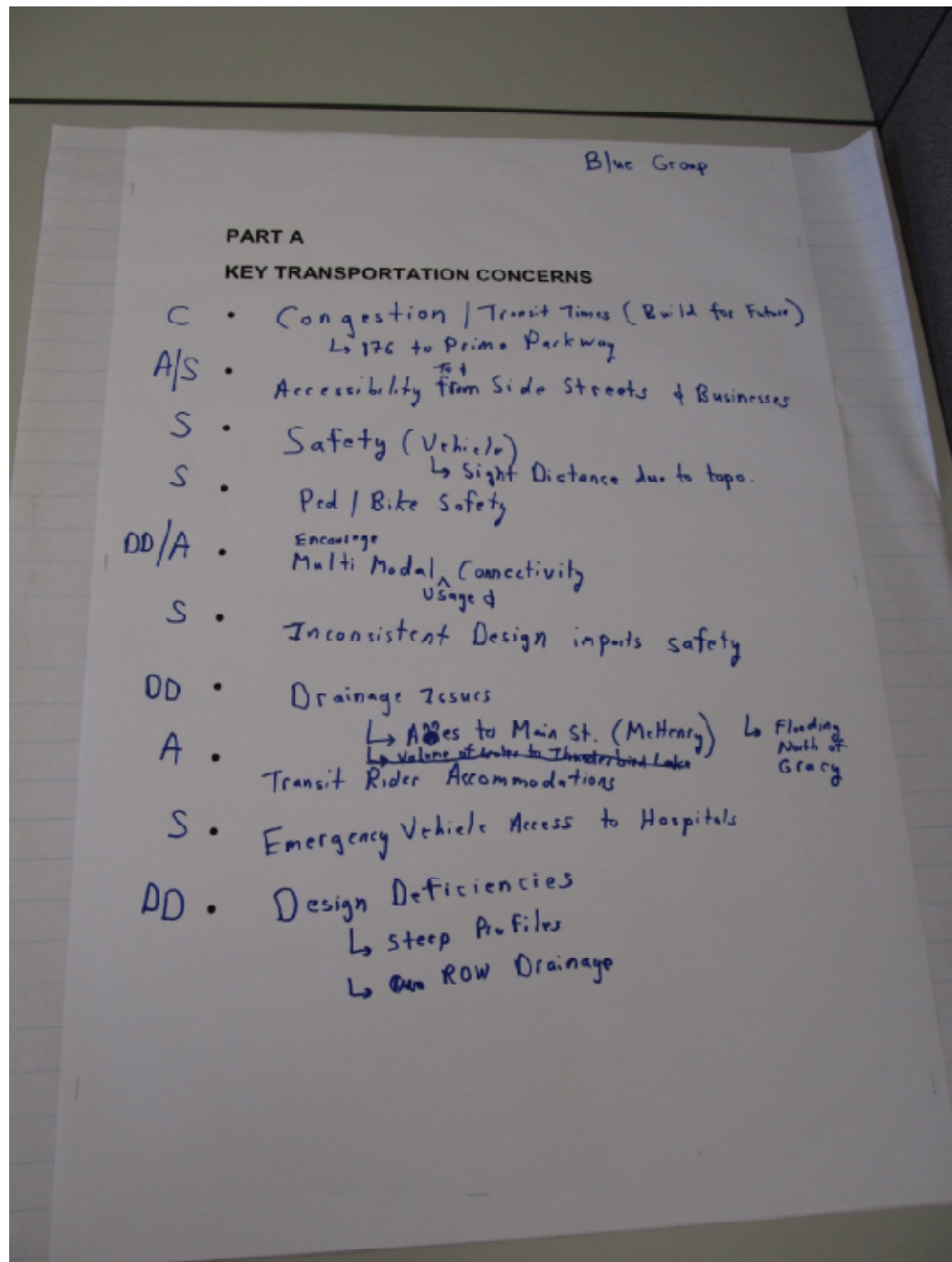
BLUE GROUP

CAG Participants: Jeannine Smith, Jon Schmitt, Eberhard Veit, Lori McConville, Catherine Jones, Jim Hicks, William Busse;

Facilitator: Mike Matkovic (CBBEL); Scribe: Sanjay Joshi (STV); Observer/Support: Scott Czaplicki (IDOT)

Flip Chart Page #1 – Workshop Exercise Objective (Same page for all 3 groups)

<p style="text-align: center;">BLUE GROUP</p> <p style="text-align: center;">PROJECT PROBLEM STATEMENT</p> <ul style="list-style-type: none">• Concise statement of the transportation problem to be solved by the proposed project based on stakeholder knowledge and user experience• Key stakeholder input into the purpose and need statement as required by NEPA prior to consideration of improvement alternatives						
<p>THE TRANSPORTATION PROBLEM(S) ALONG ILLINOIS ROUTE 31, FROM ILLINOIS ROUTE 176 TO ILLINOIS ROUTE 120, TO BE SOLVED BY THIS PROJECT IS/ARE:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>IN ADDITION, _____</p> <p>_____</p>						
<p style="text-align: center;">CITED ISSUES/CONCERNS IN THE PUBLIC INFORMATION MEETING QUESTIONNAIRE</p> <table><tbody><tr><td>• Traffic Congestion</td><td>• Residential Property Impacts</td></tr><tr><td>• Traffic Safety</td><td>• Business Impacts / Access</td></tr><tr><td>• Pedestrian/Bicycle Accessibility</td><td></td></tr></tbody></table>	• Traffic Congestion	• Residential Property Impacts	• Traffic Safety	• Business Impacts / Access	• Pedestrian/Bicycle Accessibility	
• Traffic Congestion	• Residential Property Impacts					
• Traffic Safety	• Business Impacts / Access					
• Pedestrian/Bicycle Accessibility						



Blue Group

PART B

THE TRANSPORTATION PROBLEM(S) ALONG ILLINOIS ROUTE 31, FROM ILLINOIS ROUTE 176 TO ILLINOIS ROUTE 120, TO BE SOLVED BY THIS PROJECT IS/ARE:

Congestion (existing and future), safety for all users, accessibility, and design deficiencies.

IN ADDITION, improvements should minimize environmental impacts (i.e. water quality)

THE TRANSPORTATION PROBLEM(S) ALONG ILLINOIS ROUTE 31, FROM ILLINOIS ROUTE 176 TO ILLINOIS ROUTE 120, TO BE SOLVED BY THIS PROJECT IS/ARE:

IN ADDITION, _____

THE TRANSPORTATION PROBLEM(S) ALONG ILLINOIS ROUTE 31, FROM ILLINOIS ROUTE 176 TO ILLINOIS ROUTE 120, TO BE SOLVED BY THIS PROJECT IS/ARE:

IN ADDITION, _____

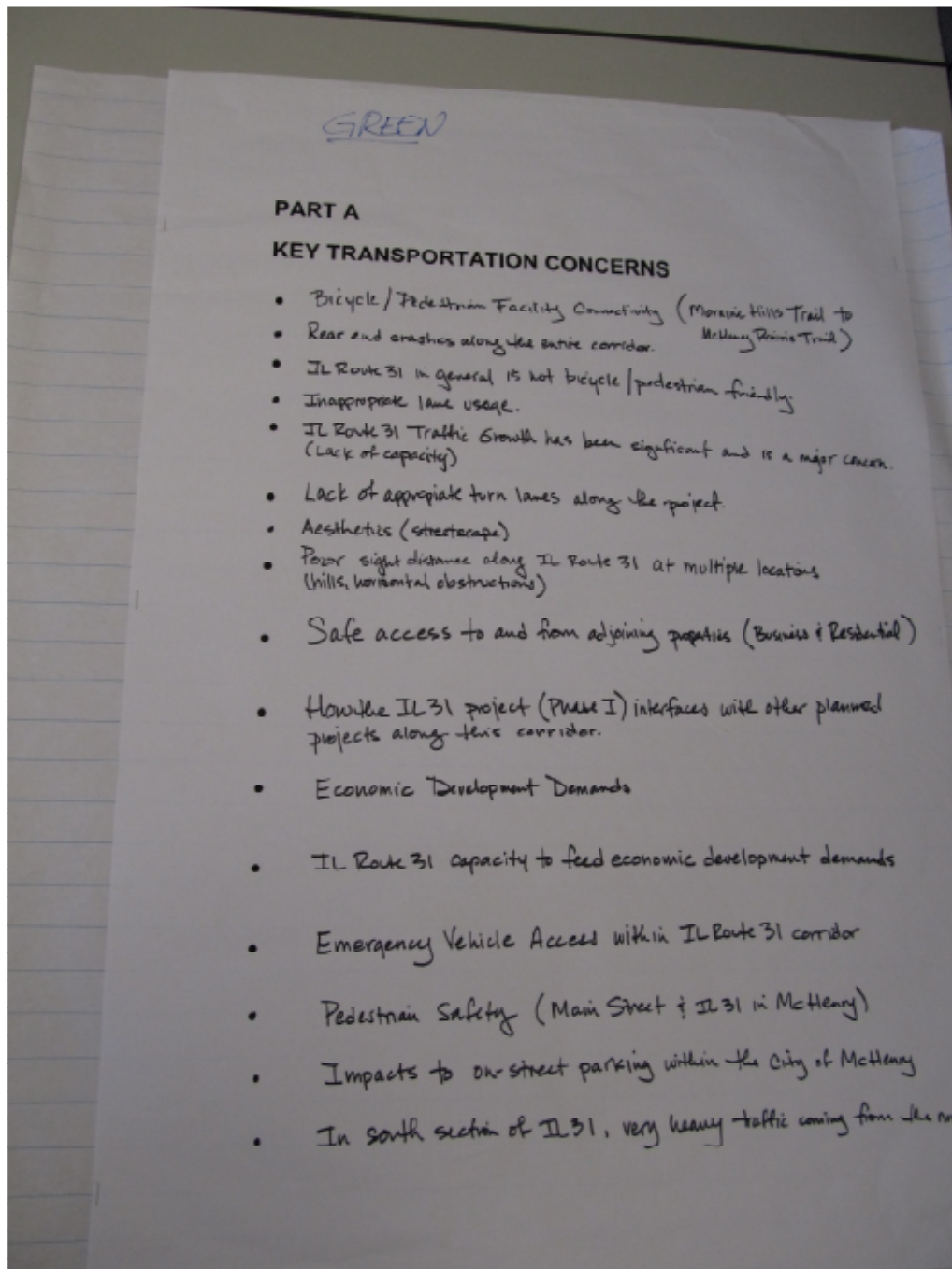
GREEN GROUP

CAG Participants: Doug Martin, Abigail Wilgreen, Herb Burnap, Bev Moore, James Howell, Tamara Howell;

Facilitator: Marty Worman (CBBEL); Scribe: John Clark (STV); Observer/Support: Steven Schilke (IDOT)

Flip Chart Page #1 – Workshop Exercise Objective (See Page 1 for Blue Group)

Flip Chart Page #2 – Key Transportation Concerns



GREEN GROUP

PROJECT PROBLEM STATEMENT

- Concise statement of the transportation problem to be solved by the proposed project based on stakeholder knowledge and user experience
- Key stakeholder input into the purpose and need statement as required by NEPA prior to consideration of improvement alternatives

THE TRANSPORTATION PROBLEM(S) ALONG ILLINOIS ROUTE 31, FROM ILLINOIS ROUTE 176 TO ILLINOIS ROUTE 120, TO BE SOLVED BY THIS PROJECT IS/ARE:

traffic congestion and safety, with accessibility
of business and residential needs and future economic growth
current and

IN ADDITION, recreational use by pedestrians and bicyclists

CITED ISSUES/CONCERNS IN THE PUBLIC INFORMATION MEETING QUESTIONNAIRE

#1 • Traffic Congestion	• Residential Property Impacts	} #3
(40) #1.01 Traffic Safety	• Business Impacts / Access	
#4 • Pedestrian/Bicycle Accessibility		

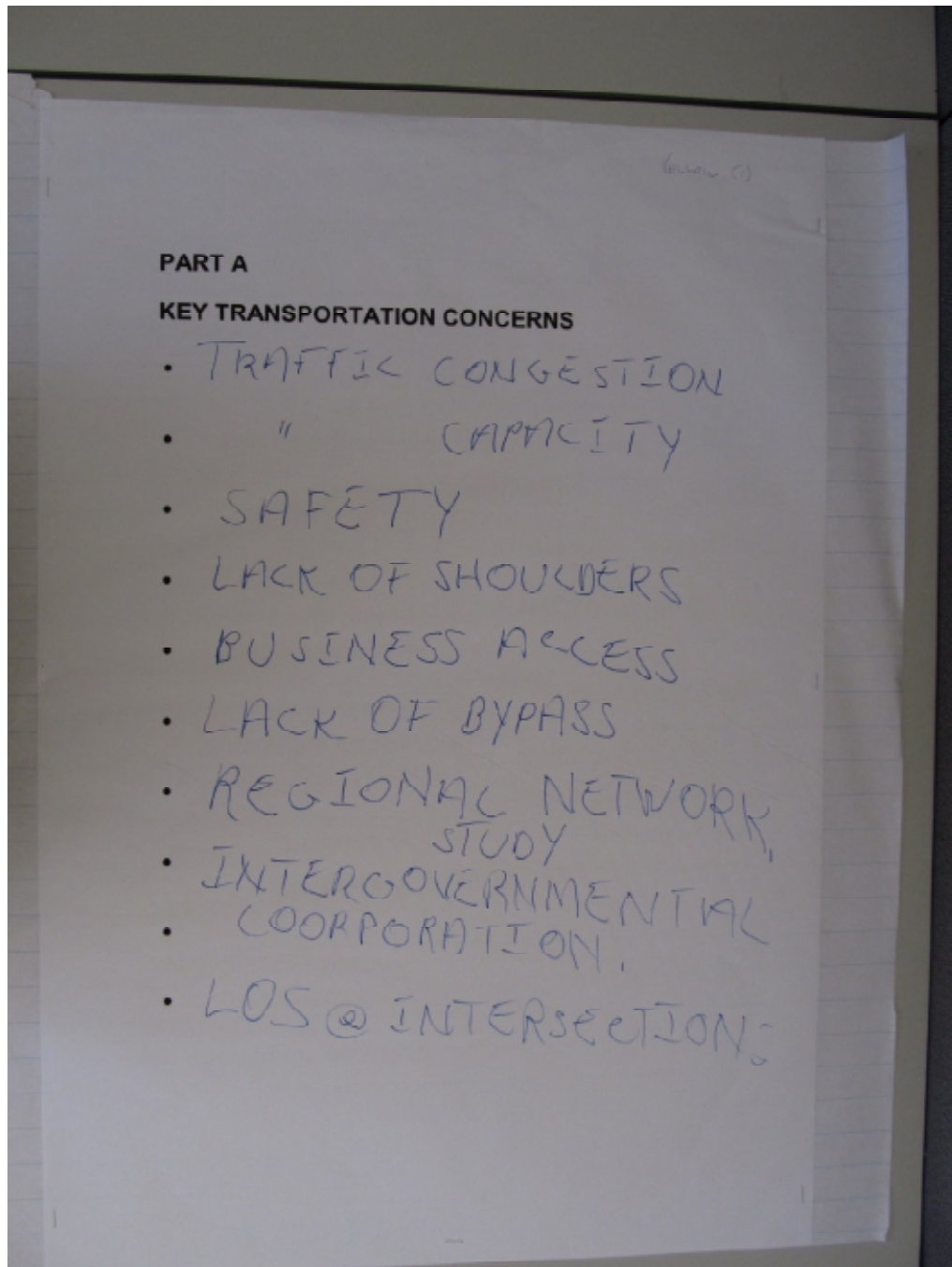
YELLOW GROUP

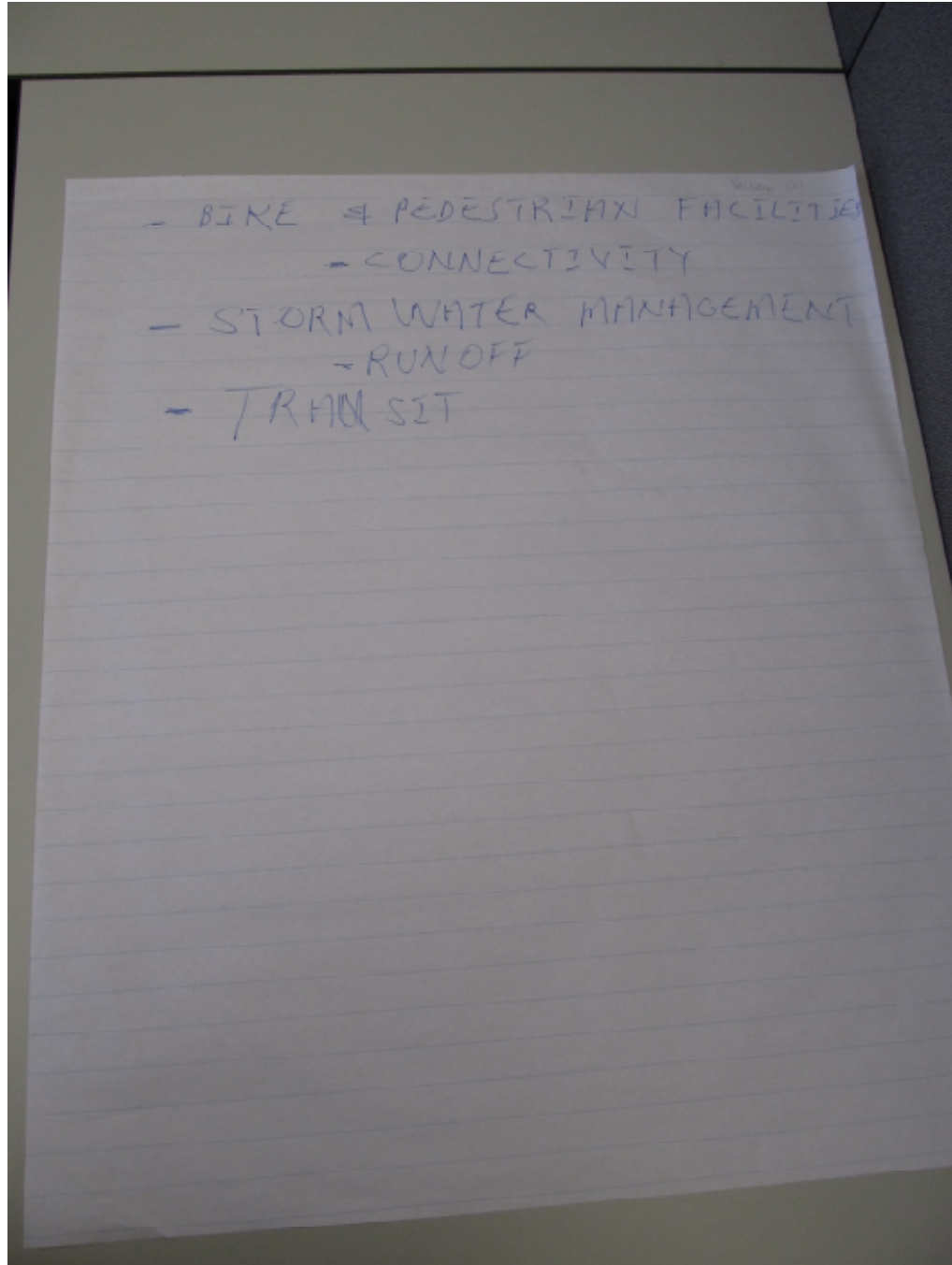
CAG Participants: Brittany Graham, Steve Carruthers, Vicky Smith, Rosemary Swierk, Brucie Chapman, Chalen Daigle;

Facilitator: Matt Huffman (CBBEL); Scribe: Jean-Alix Peralte (STV); Observer/Support: Stephen Zulkowski (STV)

Flip Chart Page #1 – Workshop Exercise Objective (See Page 1 for Blue Group)

Flip Chart Page #2 – Key Transportation Concerns (Page 1 of 2)





YELLOW GROUP

PROJECT PROBLEM STATEMENT

- Concise statement of the transportation problem to be solved by the proposed project based on stakeholder knowledge and user experience
- Key stakeholder input into the purpose and need statement as required by NEPA prior to consideration of improvement alternatives

THE TRANSPORTATION PROBLEM(S) ALONG ILLINOIS ROUTE 31, FROM ILLINOIS ROUTE 176 TO ILLINOIS ROUTE 120, TO BE SOLVED BY THIS PROJECT IS/ARE:

- CAPACITY DEFICIENCIES -
- SAFETY - BUSINESS ACCESS / DEFICIENCIES
- COMPREHENSIVE REGIONAL PLANNING

IN ADDITION, PEDESTRIAN FACILITY CONNECTIVITY
LACK OF STORMWATER MANAGEMENT
ENVIRONMENTALLY SENSITIVE
- LACK OF MULTIMODAL ACCOMMODATIONS

CITED ISSUES/CONCERNS IN THE PUBLIC INFORMATION MEETING QUESTIONNAIRE

• Traffic Congestion	• Residential Property Impacts
• Traffic Safety	• Business Impacts / Access
• Pedestrian/Bicycle Accessibility	

Small groups reconvened as large group to develop Overall Project Problem Statement

LARGE GROUP

Flip Chart Page #1 - Overall Project Problem Statement

OVERALL P.S.

PART B

THE TRANSPORTATION PROBLEM(S) ALONG ILLINOIS ROUTE 31, FROM ILLINOIS ROUTE 176 TO ILLINOIS ROUTE 120, TO BE SOLVED BY THIS PROJECT ~~W~~ARE:

Congestion (existing & future), Safety for multi-modal users, accessibility for all users, design deficiencies;

IN ADDITION, minimize overall environmental impacts (e.g. storm water & water quality).

THE TRANSPORTATION PROBLEM(S) ALONG ILLINOIS ROUTE 31, FROM ILLINOIS ROUTE 176 TO ILLINOIS ROUTE 120, TO BE SOLVED BY THIS PROJECT IS/ARE:

IN ADDITION, _____

THE TRANSPORTATION PROBLEM(S) ALONG ILLINOIS ROUTE 31, FROM ILLINOIS ROUTE 176 TO ILLINOIS ROUTE 120, TO BE SOLVED BY THIS PROJECT IS/ARE:

IN ADDITION, _____

The large group obtained consensus on 4 key transportation issues / concerns for the project corridor:

- Congestion (existing and future)
- Safety
- Accessibility
- Existing design deficiencies

Based on these key issues / concerns, the following Project Problem Statement was developed:

“The transportation problems along Illinois Route 31, from Illinois Route 176 to Illinois Route 120, to be solved by this project are: congestion (existing and future), safety for multi-modal users, accessibility for all users, and existing design deficiencies; in addition, minimize overall environmental impacts (e.g. storm water runoff and water quality).”

CAG Meeting #1 completed at approximately 3:00 p.m.

The next steps for the study will include the continuation of ongoing engineering project development activities (e.g. Traffic Analysis / Projections, Crash Analysis, and Environmental Surveys) and the development of the project purpose and need statement per NEPA requirements. The next CAG meeting is scheduled for September 22, 2011 from 1:00 p.m. to 3:00 p.m. at the McHenry County College Shah Center. At this meeting the following activities are tentatively planned: present problem statement, discuss constraint mapping and alternatives toolbox, develop purpose and need workshop, and begin preliminary alternatives discussion.

Attendance Roster – CAG Members

Community Advisory Group (CAG) Meeting #1

Illinois Route 31 Phase I Study - IL Route 176 to
IL Route 120, McHenry County

McHenry County College Shah Center
4100 W. Shamrock Lane
McHenry, Illinois 60050
Thursday, September 1, 2011
1:00 p.m. to 3:00 p.m.



	NAME	Community	Email Address	Present (Please Initial)
1	Douglas Martin	McHenry	dmartin@ci.mchenry.il.us	DM
2	George Mann	McHenry		
3	Rosemary Swierk	Prairie Grove	rosemary@directsteelc.com	RAS
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5	Terry Feddersen	Crystal Lake	Sellcommercial@yahoo.com	
6	Vicky Smith	At Large	vsmith@mchenry.edu	✓
7	Jim Hicks	Crystal Lake	ujhicks@juno.com	JH
8	Catherine Jones	McHenry	cjones@mchenry.edu	CJ
9	Herb Burnap	McHenry	hburnap@wi.rr.com	HB
10	John Massouras	McHenry	Route31auto@yahoo.com	
11	James Howell	Crystal Lake	jorthowell@yahoo.com	JH
12	Eberhard Veit	Crystal Lake	Eberhard.veit@eisenmann.com	EV
13	Ken Koehler	At Large		
14	Jon Schmitt	McHenry	jschmitt@ci.mchenry.il.us	JS
15	Abby Wilgreen	Crystal Lake	awilgreen@crystallake.org	AW
16	Steven Carruthers	Crystal Lake	scarruthers@crystallake.org	SC
17	Jeannine Smith	Prairie Grove	jsmith@prairiegrove.org	✓
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19	Lori McConville	At Large	lori.j.mcc@gmail.com	✓
20	Bev Moore	At Large	bebomoore@aol.com	BM
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23	Soren Hall	At Large	Soren.G.Hall@usace.army.mil	
24	Norm West	At Large	West.Norman@epamail.epa.gov	
25	Anna May Miller	At Large	AMMiller@co.mchenry.il.us	
26				

Attendance Roster – CAG Members

Community Advisory Group (CAG) Meeting #1

Illinois Route 31 Phase I Study - IL Route 176 to
IL Route 120, McHenry County

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Thursday, September 1, 2011
1:00 p.m. to 3:00 p.m.



	NAME	Community	Email Address	Present (Please Initial)
27	Steven Schilke	IDOT	Steven.Schilke@illinois.gov	✓
28	Scott Czaplicki	IDOT	Scott.Czaplicki@illinois.gov	SC
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30	John Clark	STV inc.	John.Clark@stvinc.com	JAC
31	Sanjay Joshi	STV inc.	Sanjay.Joshi@stvinc.com	SJ
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ROADWAY SAFETY IMPROVEMENT TOOLBOX

Tools for the Improvement of Safety Along Illinois Highways

September 22, 2011



**Illinois Department
of Transportation**

PEDESTRIANS SAFETY IMPROVEMENTS TOOLS

Pedestrians Crosswalks:

Marked crosswalks indicate optimal or preferred locations for pedestrians to cross and help designate right-of-way for motorists to yield to pedestrians. Crosswalks are often installed at signalized intersections and other selected locations.

Definition: A location that is marked as a suitable place for pedestrian crossings.

Advantage: Provide guidance for pedestrians crossing a roadway.

Delineate a preferred crossing location at intersections to channel and control pedestrian traffic.

Warn motorists to expect pedestrian crossings.

Disadvantage: May cause pedestrians to have a false sense of security.

Maintenance costs may be high if not properly planned and installed.



PEDESTRIANS SAFETY IMPROVEMENTS TOOLS

Sidewalks and Walkways:

Sidewalks and walkways are the portion of the public right-of-way that provide a separated area for people traveling on foot. Sidewalks and Walkways that are safe, accessible, and aesthetically pleasing will attract pedestrians.

Definition: A “pedestrian lane” that provides people with space to travel within the public right-of-way.

Advantage: Provide an appropriate facility for walking within the public right-of-way.
Delineates the recommended location for pedestrian use.
Reduce in pedestrian collisions with motor vehicles.
Improve mobility for pedestrians and provide access for all types of pedestrian travel: to and from home, work, parks, schools, shopping areas, transit stops, etc.

Disadvantage: May require additional right-of-way for the construction of new sidewalks.
Requires routine maintenance costs.
May not be continuous throughout the roadway network.



PEDESTRIANS SAFETY IMPROVEMENTS TOOLS

Pedestrian Countdown Signals:

Pedestrian countdown signal indications shall be used at all pedestrians crossing locations. They are required when vehicle signals are not visible to pedestrians, when signal timing is complex.

- Definition:** Pedestrian countdown signals provide information to the pedestrian regarding the amount of time remaining to safely cross the street. Easily understood by most people, a countdown signal is used in conjunction with the conventional pedestrian signal indications. Required with modifications to the traffic signals, when crosswalks are present.
- Advantage:** After the “Walk” pedestrian phase, the signal provides pedestrians with the amount of time in seconds remaining in the flashing “Don’t Walk” phase. Offers the pedestrian certainty of the duration of the flashing phase.
- Provides an exclusive pedestrian crossing phase with no conflicting traffic.
 - Improve safety and mobility for pedestrians.
 - Reduce the number of pedestrians in crosswalk when traffic signal changes from green to yellow.
- Disadvantage:** May not be easily understood by school children with limited counting ability.
- Longer “Walk” phase may also lead to longer cycle lengths.



PEDESTRIANS SAFETY IMPROVEMENTS TOOLS

Pedestrians Pushbutton:

Signal timing may not provide enough time for pedestrians to cross, therefore pedestrian phases are only provided on an as needed basis. Pedestrian pushbutton actuation allows the pedestrians to call the walk phase when needed. Pedestrian actuation are made accessible to all.

- Definition:** Pushing the button requests that the pedestrian signal phase be called.
- Advantage:** Allows a pedestrian to have an active role in whether a pedestrian signal phase is needed.
- Minimizes delay to vehicles when pedestrians are not present.
- Improve safety and mobility for pedestrians.
- Used when cross walks are present and pedestrians volumes are low.
- Disadvantage:** Pedestrians may choose not to activate the pedestrian signal phase and cross the roadway without the phase.



BICYCLISTS SAFETY IMPROVEMENTS TOOLS

Multi-Use Bike Path:

A path physically separated from motorized traffic by an open space within the highway right-of-way. Multi-use paths may be used by pedestrians, skaters, wheelchair users, joggers, and other non-motorized users. They are complementary to the road network and serve recreational and commuter bicyclists.

Definition: A “pedestrian and bicycle lane” that provides people with space to travel within the public right-of-way. Multi-use bike paths are off-road facilities designed to accommodate both bicycles and pedestrians.

Advantage: Enhance the quality of life in a community.
Provides a defined location suitable for bicycle and pedestrian traffic near roadways.
Improve safety and mobility for pedestrians and motorists.
Provide access for all types of pedestrian travel: to and from home, work, parks, schools, shopping areas, transit stops, etc.

Disadvantage: May require additional right-of-way for the construction of new multi-use trails.
Requires routine maintenance costs.
May not be continuous throughout the roadway network.



ROADWAY SAFETY IMPROVEMENTS TOOLS

Raised Median:

Median barriers are longitudinal barriers used to separate opposing traffic on a divided highway. Access management strategies such as providing raised medians and limiting driveway access are useful in promoting safe travel and reducing significantly the occurrence of cross-median crashes.

Definition: Raised medians are raised barriers in the center portion of the street or roadway that can serve as a place of refuge for pedestrians who cross a street midblock or at an intersection location.

Advantage: Manage motor vehicle traffic and provide comfortable left-hand turning pockets with fewer or narrower lanes.

Separate opposing traffic flow and eliminate left-turn conflicts.

Improve safety along the roadway.

Improve traffic flow.

Provide a safe refuge for left turning vehicles.

Provide a refuge for pedestrians crossing the street.

Provide space for street trees and other landscaping.

Disadvantage: Require additional right-of-way.



ROADWAY SAFETY IMPROVEMENTS TOOLS

Two-Way Left Turn Lane:

A two-way left-turn lane (TWLTL) may be an effective access management tool when used with other techniques such as driveway consolidation and corner clearance. TWLTL cross-sections work best in situations where traffic volume and the density of driveways is relatively low.

Definition: A TWLTL is a lane placed between opposing lanes of traffic for the purpose of allowing traffic from either direction to make left turns off of a roadway.

Advantage: TWLTLs remove left turning vehicles from the through lanes, improving safety and traffic flow.
TWLTL can also function as a lane for emergency vehicles.

Disadvantage: Require additional right-of-way for the construction of the TWLTL.
Add another lane for pedestrians and bicyclists to cross.
TWLTL do not provide refuge for pedestrians and bicyclists.
TWLTL creates additional conflict points.



ROADWAY SAFETY IMPROVEMENTS TOOLS

Driveways Improvements:

Each driveway creates potential conflicts between through traffic and traffic using that driveway. Each conflict is a potential crash. Improvements to driveway design can reduce the number of conflict points.

- Definition:** Driveway improvements include standardizing driveway width, driveway throat length and internal drive aisles.
- Advantage:**
- Provide good visibility for road users accessing the roadway.
 - Slow motor vehicles entering/exiting the roadway and establish pedestrian right-of-way.
 - Provides for safe access to the street network for egress vehicles.
 - Reduce pedestrian/motor vehicle conflicts.
 - Improve access for people with disabilities.
 - Improve safety and mobility for pedestrians and bicyclists.
- Disadvantage:**
- Require maintenance of tree branches and foliages.
 - Removal or relocation of signs and other appurtenances.



ROADWAY SAFETY IMPROVEMENTS TOOLS

Access Management:

Access management is a set of techniques that state and local governments can use to control access to highways, major arterials, and other roadways. Access management includes several techniques that are designed to increase the capacity of these roads, manage congestion, and reduce crashes. .

- Definition:** Access management separates access points so that turning and crossing movements occur at fewer locations. Access management tools include:
- Regulate minimum spacing of median openings and access connections (driveways and street connections).
 - Limit the number of access points per property, or consolidating access points and encouraging shared driveways.
 - Move access points away from signalized intersections and freeway ramps.
 - Promote interconnection of parking lots and unified on-site circulation systems.
 - Close or replace a full median opening with a directional opening.
 - Incorporate right-turn and left-turn lanes into roadways.
- Advantage:**
- Reduce conflicts between those traveling along the corridor and those entering or leaving the
 - Provide access appropriate to the corridor, including pedestrian and bicyclists. function of the roadway and area it serves.
 - Maintain flow of traffic along a corridor.
 - Slow motor vehicles entering/exiting the roadway and establish pedestrian right-of-way.
 - Provides for safe access to the street network.
 - Improve safety and mobility for pedestrians and bicyclists.
- Disadvantage:**
- Reduce direct access to properties.
 - May not be continuous throughout the roadway network.
 - Difficult to eliminate or modify existing driveways due to reluctance from business owners.



ROADWAY SAFETY IMPROVEMENTS TOOLS

Improved Sight Distance:

Stopping sight distance is defined as the distance needed for drivers to see an object on the roadway ahead and bring their vehicles to safe stop before colliding with the object. Where there is insufficient sight distance to vehicles or other objects on the roadway ahead, a fundamental strategy is to design a roadside that will improve a driver's ability to avoid a crash.

Definition: Sight distance is the length of the roadway ahead that is visible to the driver.

Advantage: Improve drivers' ability to avoid crashes.
Improve driver awareness on the approach to intersections.
Improve safety for all road users.

Disadvantage: Require continued maintenance.
May require roadway realignment and additional Right-of-Way.



ROADWAY SAFETY IMPROVEMENTS TOOLS

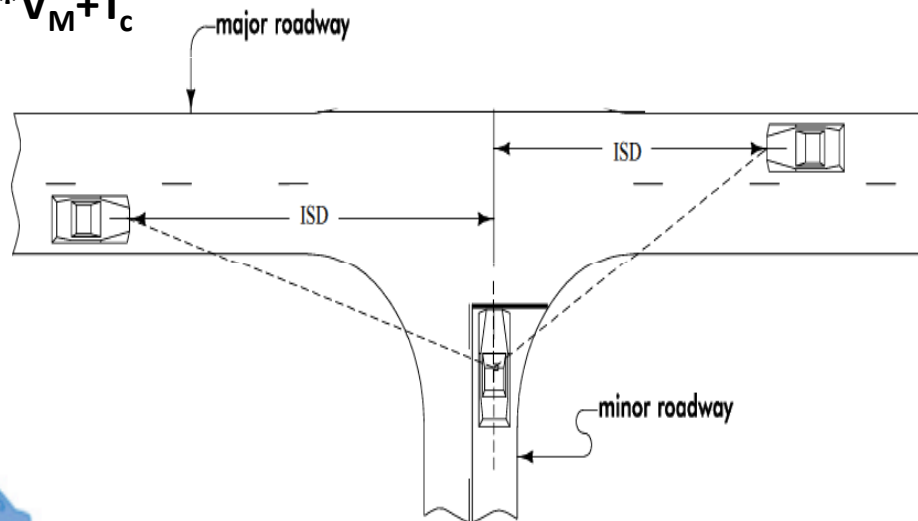
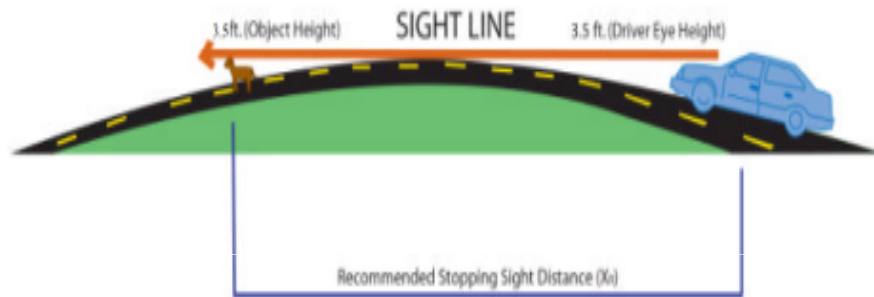
Intersection Sight Distance (ISD) Triangle:

Adequate ISD is one of the most important factors contributing to overall safety at unsignalized intersections. IDOT uses gap acceptance as the conceptual basis for its ISD criteria.

ISD is obtained by providing clear sight triangles both to the right and left as shown in Figure. It is a function of the design speed along the major roadway, the height of the driver's eye (h_1), the height of the object (h_2), and location of the driver's eye on the minor road.

$$ISD = 1.467 * V_M + T_c$$

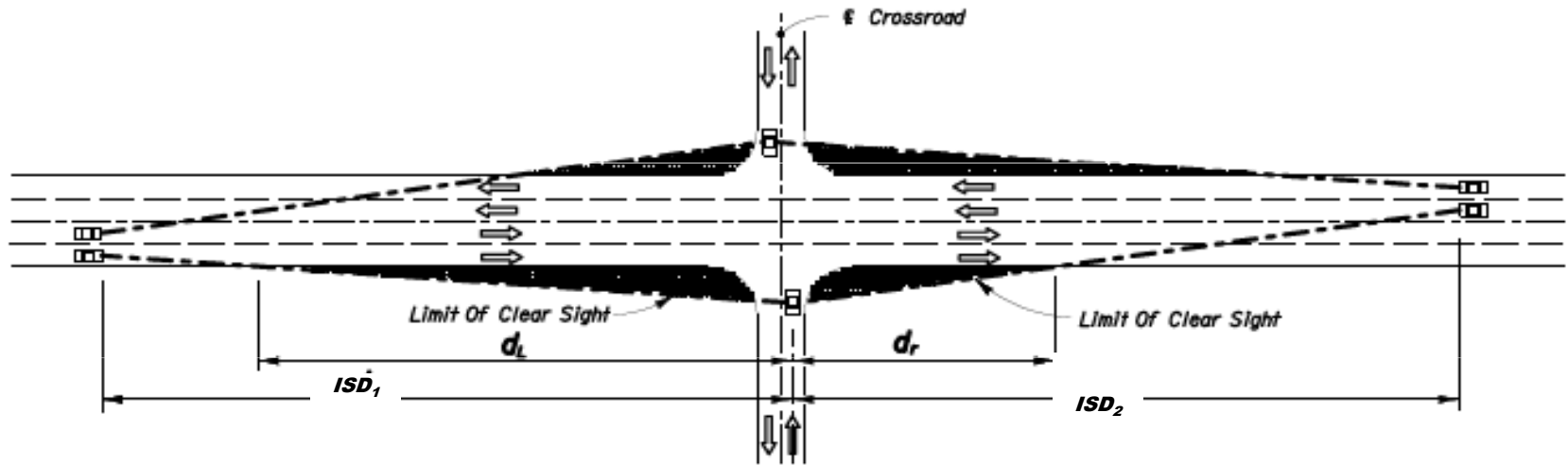
Acceptance Gap, T_c	
Car	7.5
SU Truck	9.5
Semi Truck	11.5



Location of the driver's eye is assumed to be 14.4 ft from the edge of the major road traveled way.

ROADWAY SAFETY IMPROVEMENTS TOOLS

Intersection Sight Distance (ISD) Triangle



PICTORIAL
4 LANE UNDIVIDED

ROADWAY SAFETY IMPROVEMENTS TOOLS

Horizontal Curve Realignment:

Horizontal curves are changes in the alignment or direction of the road. Horizontal curves can present special safety problems due to sight distance issues and during slippery surface conditions.

Definition: A horizontal curve that has been realigned by increasing or “flattening” the radius of the curve.

Advantage: Improved sight distance.
Reduces side force experienced by the driver.

Reduces potential for lane departure/run-off road crashes

Disadvantage: Require additional right-of-way.



INTERSECTION SAFETY IMPROVEMENTS TOOLS

Left Turn Lane:

When high volumes of left turning vehicles combined with excessive delay, or turning movement collisions are common, it is sometimes necessary to install left lane at intersections. The addition of a left-turn lane can improve the operations and safety at an intersection.

Definition: A Left-turn lane is used to provide space for the deceleration and storage of left turning vehicles.

Advantage: Remove stopped left turning vehicles from through traffic, improving safety along the roadway.

Substantially increase the capacity of many roadways.

Reduce rear-end crashes along roadway segment.

Disadvantage: Require additional right-of-way.

Add another lane for pedestrians and bicyclists to cross.



INTERSECTION SAFETY IMPROVEMENTS TOOLS

Traffic Signals:

When traffic volumes increase beyond the capacity of an all-way stop sign, it may be necessary to install a traffic signal. Traffic signals are used to assign vehicular and pedestrian right-of-way. They are used to promote the orderly movement of vehicular and pedestrian traffic and to prevent excessive delay to traffic.

Definition: Traffic signals are used to assign vehicular and pedestrian right-of-way. Traffic signals will be installed only if one of the warrants specified by the *Manual on Uniform Traffic Control Devices* (MUTCD) has been satisfied.

Advantage: Provide for orderly movement of traffic.
Increase traffic capacity of the intersection.
Reduce the frequency of certain types of crashes.
Provide safe crossing of minor street traffic (vehicular, bicyclist, and pedestrian).

Disadvantage: May increased delay for the major through movement.
May promote disobedience of the signal indications.
May increase in the frequency of rear-end crashes at intersection.



INTERSECTION SAFETY IMPROVEMENTS TOOLS

Traffic Signal Modernization:

Traffic signal modernizations can benefit all road users. Low-cost improvements to signalized intersections that can be implemented in a short time period include revising the signal phasing and/or operational controls at the intersection, upgrading to LED signal heads, adding mast arms, providing one head per lane, modifying the all-red and yellow clearance interval, installing emergency vehicle pre-emption systems, providing actuated signals, providing signal coordination, and improving signal timing to explicitly address safety concerns.

Definition: Traffic signal modernizations may include installation of new hardware and new components to the controller to improve the traffic signal operations.

Advantage: Improve signal visibility.
Address intentional violations.
Improve likelihood of stopping for the red signal by providing additional information to the motorist regarding the traffic signal.

Disadvantage: Costs associated with installation and maintenance.



ROADWAY SAFETY IMPROVEMENTS TOOLS

Roadway Lighting:

Good quality and placement of lighting can enhance an environment as well as increase comfort and safety. Pedestrians often assume that motorists can see them at night; they are deceived by their own ability to see the oncoming headlights.

Definition: Roadway lighting increase the level of roadway luminance.

Advantage: Roadway lighting enhances security and provides safety and comfort for both pedestrians and motorists.
Enhance commercial districts.
Reduces Glare from oncoming vehicles and light from adjacent land use.

Disadvantage: Costs associated with installation and maintenance.

